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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/580,207

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Tsunehito Tsushima

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EXAMINER

BEYEN, ZEWDU A

ART UNIT

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/580,207	<b>Applicant(s)</b> TSUSHIMA ET AL.	
	<b>Examiner</b> ZEWDU A. BEYEN	<b>Art Unit</b> 4144	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 23 May 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 20-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 May 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/23/2006</u> .  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

1. Claims 20-29, have been examined and are pending.

#### ***Information Disclosure Statement***

2. An initialed and dated copy of applicant's IDS form 1449 submitted

05/23/2006, is attached to the instant office action.

#### ***Abstract Objection***

3. The Abstract is objected to because it does not follow the format set out in the MPEP Chapter 608.01 (b). *The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words.* Please make appropriate corrections.

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 20, 21, 24, 26, 28 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Twiss to (US-PGPUB-2008/0049619), and further in view of Nagaraj to (US6947415)

**Regarding claims 20, 28 and 29**, Twiss teaches router device for relaying data communication data receiving means for receiving communication data including at least one address of a destination from the first network(**Twiss ,[0072] discloses packets with IP addresses are receive coming from the network**)

communication data storing means for storing therein the at least one communication data received by the communication data receiving means(**Twiss , [0072] discloses once the packets received they stored in a storage**)

communication data sending means for sending the communication data to the second network **(Twiss , [0071] discloses sending packets from one entity network to another entity network )**;

communication data temporal storing means for temporarily storing therein the communication data sent to the second network by the communication data sending means**(Twiss , [ 0071] discloses a buffer to store the transmitting packets between the network )** ;

destination comparing means for comparing the destination included in the one or more communication data stored in the communication data storing means with the destination included in the communication data stored in the communication data temporal storing means one by one **(Twiss ,[0071] discloses comparing the received packets connection identifiers: a source IP address and port and a destination IP address and port for the purpose of transmission)**

Twiss, silent on communication data erasing means for erasing the transmitted communication data from the communication data storing means in response to sending the communication data to the second network by the communication data sending means

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communication data transmission controlling means for designating the  
communication data sending means to transmit the communication data stored in  
the communication data storing means if a comparison result by the destination  
comparing means indicates destination matching

However, Nagaraj teaches communication data transmission controlling means for designating the communication data sending means to transmit the communication data stored in the communication data storing means if a comparison result by the destination comparing means indicates destination matching **(Nagaraj ,column.3 lines, 30-44 discloses Routing tables generally depend on the routing algorithm being used within a router. Each entry in a routing table has at least two fields: IP address prefix The IP address prefix specifies a set of destinations for which the routing entry is valid according to the IP addressing scheme. If no routing table entry matches a destination address for the packet being processed, the packet is generally discarded as undeliverable)**

Therefore it would have been obvious to one ordinary skill in the art at the time the invention was made to communication data transmission controlling means for designating the communication data sending means to transmit the communication data stored in the communication data storing means if a comparison result by the destination comparing means indicates destination matching, as suggested by Nagaraj. This modification would benefit the system of Twiss to efficiently route the packets.

Regarding the limitation communication data erasing means for erasing the transmitted communication data from the communication data storing means in response to sending the communication data to the second network by the communication data sending means is an inherent mechanism for the purpose of saving storage space.

**Regarding claim 21**, the combination of Twiss- Nagaraj teaches the router device according to claim 20, wherein the communication data transmission controlling means repeats a processing of designating the communication data sending means to transmit the communication data stored in the communication data storing means until no communication data is stored in the communication data storing means if the comparison result by the destination comparing means indicates destination matching (Twiss, **fig.7, [0035]**, **discloses the consistence address matching and routing of packets. As long as there is a packet with a matching destination address the system keeps routing till there is no packets left**)

**Regarding claim 24**, the combination of Twiss- Nagaraj teaches the router device according to claim 20, wherein the communication data includes data type information representing a type of control, and parameter information representing setting contents in association with the data type information(**Twiss, [0022] discloses code instruction store in memory to read a portion of said payload data for traffic of a**

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**communications session between a first entity and a second entity over the network for the purpose of identifying the type of data)** , the router device further includes data type comparing means for comparing the data type information included in the communication data stored in the communication data storing means with the data type information included in the communication data stored in the communication data temporal storing means(**Twiss, [0022] , discloses compare said read signalling data with said stored signalling data to identify an attempt to begin a further communications session of said identified traffic type between said first and second entities or to receive said communications session)** , and the communication data transmission controlling means extracts the parameter information included in the communication data stored in the communication data storing means (**Twiss, [0022] discloses stored signalling data for the purpose of identifying incoming data )** and designates the communication data sending means to transmit the extracted parameter information( **Twiss, [0022] , discloses identification result (which means whether the data type allowed or not ))** as the communication data if a comparison result by the destination comparing means indicates destination matching and if a comparison result by the data type comparing means indicates data type matching(**Twiss, [0022] discloses once the code determines the comparison result to control traffic of further to stop or resumed communications session responsive to said identification)**

**Regarding claim 26**, the combination of Twiss- Nagaraj teaches the router device according to claim 20, wherein a transmission rate of a transmission



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medium of the first network is higher than a transmission rate of a transmission medium of the second network(**Twiss, fig 5b , discloses two different transmission medium networks**)

5. Claims 22, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Twiss to **(US-PGPUB-2008/0049619)**, and Nagaraj to **(US6947415)** and further in view of Ohta to **(US-PGPUB-2002/0181459)**

**Regarding claim 22**, the combination of Twiss- Nagaraj silent on the router device according to claim 20, further comprising basic data number counting means for counting the number of basic data included in the communication data received by the communication data receiving means, the basic data representing processing contents, wherein the communication data receiving means includes basic data number information representing the number of basic data counted by the basic data number counting means in the received communication data.

However, Ohta teaches basic data number **(Ohta ,i.e. block of packets)** counting means **(Ohta , i.e. data amount detecting/comparing part)** for counting the number of basic data included in the communication data received by the communication data receiving means, the basic data representing processing contents, wherein the communication data receiving means includes basic data number information representing the number of basic data counted by the basic data number counting means in the received communication data (**Ohta , [0169] discloses receive data amount**

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**detecting /comparing part 909A takes receive data buffer information out of the receive data buffer part 907A and outputs the receive data buffer)**

Therefore it would have been obvious to one ordinary skill in the art at the time the invention was made to include counting means for counting the number of basic data included in the communication data received by the communication data receiving means, the basic data representing processing contents, wherein the communication data receiving means includes basic data number information representing the number of basic data counted by the basic data number counting means in the received communication data, as suggested by Ohta. This modification would benefit the system of the combination to know how many blocks of data present in the transmission.

**Regarding claim 23**, the combination of Twiss- Nagaraj silent on the router device according to claim 20, further comprising received time measuring means for measuring a time when the communication data has been received by the communication data receiving means, wherein the communication data receiving means acquire received time information representing the received time measured by the received time measuring means, and includes the acquired received time information in the received communication data in response to receiving the communication data from the first network.

However, Ohta teaches received time measuring means for measuring a time when the communication data has been received by the communication data receiving means, wherein the communication data receiving means acquire received time

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information representing the received time measured by the received time measuring means, and includes the acquired received time information in the received communication data in response to receiving the communication data from the first network (**[0057] discloses adding timestamp to the received data when it arrives**) .

Therefore it would have been obvious to one ordinary skill in the art at the time the invention was made to include time measuring means for measuring a time when the communication data has been received by the communication data receiving means, wherein the communication data receiving means acquire received time information representing the received time measured by the received time measuring means, and includes the acquired received time information in the received communication data in response to receiving the communication data from the first network, as suggested by Ohta. This modification would benefit the system of the combination to prioritize the received packets as the first come first serve base.

6. Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over Twiss to **(US-PGPUB-2008/0049619)**, and Nagaraj to **(US6947415)** and further in view of Mayer to **(US-PGPUB-2004/0081153)**

**Regarding claim 25**, the combination of Twiss- Nagaraj is silent on the router device according to claim 20, further comprising data contents comparing means for comparing data contents of the communication data stored in the communication data storing means with data contents of the communication data stored in the communication data temporal storing means, wherein the communication data transmission controlling means counts

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the number of communication data having the same destination and the same data contents, as a result of comparison by the destination comparing means and as a result of comparison by the data contents comparing means, and designates the communication data sending means to transmit same data number information representing the number of the communication data having the same destination and the same data contents counted by the communication data transmission controlling means

However, Mayer teaches data contents comparing means for comparing data contents of the communication data stored in the communication data storing means with data contents of the communication data stored in the communication data temporal storing means, wherein the communication data transmission controlling means counts the number of communication data having the same destination and the same data contents, as a result of comparison by the destination comparing means and as a result of comparison by the data contents comparing means, and designates the communication data sending means to transmit same data number information representing the number of the communication data having the same destination and the same data contents counted by the communication data transmission controlling means **(Mayer, [0010] discloses improving routing efficiency and bandwidth utilization efficiency in Networks of interconnected devices, by using much more efficiently physical addresses and/or by grouping together identical data packets from the same source going to the same general area so that the body of the packet is sent only once with a multiple list of targets attached to it, to each general target area. These grouped packets are then preferably broken down into smaller groups by the routers in the general target area and finally broken down to individual data packets for delivering to the final**

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**actual destinations. This saves both bandwidth and the number of routing decisions needed on the way, since only a single copy of the identical data is sent in each group, and this is why this can be called condensed packets)**

Therefore it would have been obvious to one ordinary skill in the art at the time the invention was made to include data contents comparing means for comparing data contents of the communication data stored in the communication data storing means with data contents of the communication data stored in the communication data temporal storing means, wherein the communication data transmission controlling means counts the number of communication data having the same destination and the same data contents, as a result of comparison by the destination comparing means and as a result of comparison by the data contents comparing means, and designates the communication data sending means to transmit same data number information representing the number of the communication data having the same destination and the same data contents counted by the communication data transmission controlling means, as suggested by Mayer. This modification would benefit the system of the combination improving routing efficiency and bandwidth utilization efficiency in Networks of interconnected devices ([Mayer ,[0010])

7. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Twiss to (US-PGPUB-2008/0049619), and Nagaraj to (US6947415) and further in view of Takihiro to (US-PGPUB-2004/0109452)

**Regarding claim 27**, the combination of Twiss- Nagaraj silent on the router device according to claim 20, further comprising broadcast message receiving registering means for pre-registering an apparatus which is required to receive the communication data as a broadcast message among the apparatuses connected to the first network and the second network, wherein the communication data sending means sends the communication data solely to the apparatus which is connected to the second network and is pre-registered by the broadcast message receiving registering means if the communication data transmitted from the first network and received by the communication data receiving means is judged to be the broadcast message

However ,Takihiro teaches broadcast message receiving registering means for pre-registering an apparatus which is required to receive the communication data as a broadcast message among the apparatuses connected to the first network and the second network (**Takihiro , fig.1 . discloses registered broadcasting terminals in subnetwork**) , wherein the communication data sending means sends the communication data solely to the apparatus which is connected to the second network and is pre-registered by the broadcast message receiving registering means if the communication data transmitted from the first network and received by the communication data receiving means is judged to be the broadcast message(**Takihiro , [0070] discloses a conventional IP network, each of subnetworks connected to a router is consists of one broadcast segment. In this case, the router can unconditionally specify a segment to which a destination terminal is connected from the destination IP address of a received packet**).

Therefore it would have been obvious to one ordinary skill in the art at the time the invention was made to include broadcast message receiving registering means for pre-registering an apparatus which is required to receive the communication data as a broadcast message among the apparatuses connected to the first network and the second network , wherein the communication data sending means sends the communication data solely to the apparatus which is connected to the second network and is pre-registered by the broadcast message receiving registering means if the communication data transmitted from the first network and received by the communication data receiving means is judged to be the broadcast message, as suggested by Takihiro. This modification would benefit the system on the combination by allowing the terminals in the network to exchange messages securely.

#### *Conclusion*

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. (See PTO-892).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zewdu Beyen whose telephone number is (571)-270-7157. The examiner can normally be reached on 8:00-5:30 Mon-Fri.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Taghi T. Arani can be reached on (571) 272-3787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for

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published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/ZEWDU BEYEN/

Examiner, Art Unit 4144

/Taghi T. Arani/

Supervisory Patent Examiner, Art Unit 4144